

AGREEMENT
BETWEEN
THE UNITED STATES NUCLEAR REGULATORY COMMISSION
AND
ATOMIC ENERGY OF CANADA LIMITED/
L'ENERGIE ATOMIQUE DU CANADA LIMITEE
RELATING TO
PARTICIPATION IN THE USNRC PROGRAM
OF SEVERE ACCIDENT RESEARCH

This Agreement is made between the United States Nuclear Regulatory Commission, hereinafter referred to as the USNRC, and Atomic Energy of Canada Limited, hereinafter referred to as AECL.

Considering that the USNRC and AECL, the two together hereinafter referred to as the Parties:

1. Have a mutual interest in cooperation in the field of severe accident safety research with the objective of improving and thus ensuring the safety of civilian nuclear installations on an international basis;
2. Recognize a need to equitably share both the resources resulting from this research and the effort required to develop those resources; and
3. Have cooperated in this program in the past under a joint cooperative agreement which expired in December 1996, and wish to renew and continue this cooperation for an additional five years under this new joint cooperative Agreement;

They have therefore AGREED as follows:

ARTICLE I - PROGRAM COOPERATION

The Parties, in accordance with the provisions of this Agreement and subject to applicable laws and regulations in force in their respective countries, will join together in cooperative research for the severe accident research program sponsored by the USNRC and for similar research programs sponsored by AECL.

ARTICLE II - FORMS OF COOPERATION

Cooperation between the Parties may take the following forms:

- A. Exchange of information in the form of technical reports, experimental data, correspondence, newsletters, visits, joint meetings, and such other means as the Parties agree.
- B. Temporary assignment of personnel of one Party or of its contractors to the laboratory or facilities owned by the other Party or in which it sponsors research; each assignment shall be considered on a case-by-case basis.
- C. Execution of joint programs and projects, including those involving a division of activities between the Parties; each joint program and project shall be considered on a case-by-case basis.
- D. Use by one Party of facilities that are owned by the other Party or in which research is being sponsored by the other Party; such use of facilities may be subject to commercial terms and conditions.
- E. If either Party wishes to visit, assign personnel, or use the facilities owned or operated by entities other than the Parties to this Agreement, the Parties recognize that prior approval by such entities will, in general, be required regarding terms upon which such visit, assignment, or use shall be made.
- F. Any other form agreed between the Parties.

ARTICLE III - SCOPE OF AGREEMENT

A. USNRC Scope of Responsibility

Subject to the availability of appropriated funds, the USNRC will provide over the duration of this Agreement the following specified goods and services related to the severe accident research program areas:

- 1. MELCOR code development documents and related software, assessment, and maintenance, and participation in the MELCOR Cooperative Assessment Program (MCAP);
- 2. Copies of all pertinent technical program documents such as quick-look reports, technical memoranda and notes, and laboratory reports as soon as they have received appropriate USNRC management review;

3. On request, make available to AECL relevant severe accident codes and related documentation developed under this program and accommodate reasonable requests for assistance from AECL for support in their implementation and use;
4. Permit personnel sponsored by AECL to participate in technical program review meetings and technical progress meetings except for those meetings primarily concerned with administrative and fiscal matters;
5. Facilitate visits by personnel sponsored by AECL to sites at which work relevant to the objective is being carried out;
6. Permit the assignment of personnel sponsored by AECL to participate and work in the USNRC's severe accident research program and to have full and ready access to relevant documentation, codes and results as described above.

B. AECL Scope of Responsibility

Subject to the availability of appropriated funds, AECL will participate in the USNRC Cooperative Severe Accident Research Program (CSARP) by providing cash payments, as set forth in Article VII below. In addition, AECL will provide the USNRC with a summary of the results of AECL sponsored severe accident research.

Assessments will be done by AECL or its contractors in applications of severe accident codes received from the USNRC under the scope of this Agreement. The assessments will consist of applications done in experimental facilities to which AECL has access and/or at Canadian nuclear power plants. In general, the USNRC is expected to provide limited assistance in the specific AECL applications of USNRC codes provided under this program.

ARTICLE IV - ADMINISTRATION OF THE AGREEMENT

- A. The USNRC and AECL will each designate one representative to coordinate and determine the detailed implementation of this Agreement. These representatives may, at their discretion, delegate this responsibility to the appropriate technical staff with respect to a given issue. The single designated representative will be referred to as an Administrator of this Agreement.
- B. The Agreement provides restrictions concerning dissemination of proprietary, confidential, or privileged information. Other information that may be restricted includes matters related to organization, budget, personnel, or management.
- C. The USNRC and AECL will endeavor to select technical personnel for assignment to these cooperative programs who can contribute positively to the programs. USNRC and Canadian technical personnel assigned for extended periods will be considered visiting scientists within the programs in this Agreement and will be expected to participate in the conduct of the analysis and/or experiments as necessary. The salaries of the visiting scientists will continue to be the responsibility of their employer.

- D. Each Party to this Agreement will have access to all reports written by the other Party's partner's technical personnel assigned to the respective programs that derive from its participation in those programs.
- E. Travel costs, living expenses, and salaries will be borne by the Party which incurred them unless specified otherwise.

ARTICLE V - EXCHANGE AND USE OF INFORMATION

A. General

The Parties support the widest possible dissemination of information provided or exchanged under this Agreement, subject to the need to protect both proprietary and other confidential or privileged information as may be exchanged hereunder.

B. Definitions (As used in this Agreement)

- 1. The term "information" means nuclear energy-related regulatory, safety, safeguards, waste management, scientific, or technical data, including information on results or methods of assessment, research, and any other knowledge intended to be provided or exchanged under this Agreement.
- 2. The term "proprietary information" means information created or made available under this Agreement which contains trade secrets or other privileged or confidential commercial information (such that the person having the information may derive an economic benefit from it or may have a competitive advantage over those who do not have it), and may only include information which:
 - a. has been held in confidence by its owner;
 - b. is of a type which is customarily held in confidence by its owner;
 - c. has not been transmitted by the owner to other entities (including the receiving Party) except on the basis that it be held in confidence;
 - d. is not otherwise available to the receiving Party from another source without restriction on its further dissemination; and
 - e. is not already in the possession of the receiving Party.
- 3. The term "other confidential or privileged information" means information, other than "proprietary information," which is protected from public disclosure under the laws and regulations of the country of the Party providing the information and which has been transmitted and received in confidence.

C. Marking Procedures for Documentary Proprietary Information

A Party receiving documentary proprietary information pursuant to this Agreement shall respect the privileged nature thereof, provided such proprietary information is clearly marked with the following (or substantially similar) restrictive legend:

This document contains proprietary information furnished in confidence under an Agreement dated _____ between the United States Nuclear Regulatory Commission and Atomic Energy of Canada Limited and shall not be disseminated outside these organizations, their consultants, contractors, and concerned departments and agencies of the Government of the United States and the Government of Canada without the prior approval of (name of transmitting Party). This notice shall be marked on any reproduction hereof, in whole or in part. These limitations shall automatically terminate when this information is disclosed by the owner without restriction.

This restrictive legend shall be respected by the receiving Party, and proprietary information bearing this legend shall not be used for commercial purposes, made public, or disseminated in any manner unspecified by or contrary to the terms of this Agreement without the consent of the transmitting Party.

D. Dissemination of Documentary Proprietary Information

1. In general, proprietary information received under this Agreement may be freely disseminated by the receiving Party without prior consent to persons within or employed by the receiving Party, and to concerned Government departments and Government agencies in the country of the receiving Party;
2. In addition, proprietary information may be disseminated without prior consent:
 - a. to prime or subcontractors or consultants of the receiving Party located within the geographical limits of that Party's State, for use only within the scope of work of their contracts with the receiving Party in work relating to the subject matter of the proprietary information;
 - b. to domestic organizations permitted or licensed by the receiving Party to construct or operate nuclear production or utilization facilities, or to use nuclear materials and radiation sources, provided that such proprietary information is used only within the terms of the permit or license; and
 - c. to domestic contractors of organizations identified in D.2.b., above, for use only in work within the scope of the permit or license granted to such organizations;

Provided that any dissemination of proprietary information under D.2.a., b., and c., above, shall be on an as-needed, case-by-case basis, shall be pursuant to an agreement of confidentiality, and shall be marked with a restrictive legend substantially similar to that appearing in C. above.

3. With the prior written consent of the Party furnishing proprietary information under this Agreement, the receiving Party may disseminate such proprietary information more widely than otherwise permitted in subsections 1. and 2. The Parties shall cooperate in developing procedures for requesting and obtaining approval for such wider dissemination, and each Party will grant such approval to the extent permitted by its national policies, regulations, and laws.

E. Marking Procedures for Other Confidential or Privileged Information of a Documentary Nature

A Party receiving under this Agreement other confidential or privileged information shall respect its confidential nature, provided such information is clearly marked so as to indicate its confidential or privileged nature and is accompanied by a statement indicating:

1. that the information is protected from public disclosure by the Government of the transmitting Party; and
2. that the information is transmitted under the condition that it be maintained in confidence.

F. Dissemination of Other Confidential or Privileged Information of a Documentary Nature

Other confidential or privileged information may be disseminated in the same manner as that set forth in paragraph D., Dissemination of Documentary Proprietary Information.

G. Non-Documentary Proprietary or Other Confidential or Privileged Information

Non-documentary proprietary or other confidential or privileged information provided in seminars and other meetings arranged under this Agreement, or information arising from the attachments of staff, use of facilities, or joint projects, shall be treated by the Parties according to the principles specified for documentary information in this Agreement provided, however, that the Party communicating such proprietary or other confidential or privileged information has placed the recipient on notice as to the character of the information communicated.

H. Business-Confidential Information

In the event that information identified in a timely fashion as business-confidential is furnished or created under a written arrangement, each Party shall protect such information in accordance with applicable laws, regulations, and administrative practice. Information may be identified as business-confidential if a person having the information may derive an economic benefit from it or may obtain a competitive advantage over those who do not have it, the information is not generally known or publicly available from other sources, and the owner has not previously made the information available without imposing in a timely manner an obligation to keep it confidential. Without prior written consent, neither of the Parties shall disclose any business-confidential information provided by the other Party except to employees and personnel authorized for the specific project. All such disclosures shall be for use only within the scope of

their contracts or employment with the Parties relating to cooperation under the relevant written arrangement. The Parties shall impose, or shall have imposed, an obligation on those receiving such information to keep it confidential. If one of the Parties becomes aware that, under its laws or regulations, it will be, or may reasonably be expected to become, unable to meet the non-disclosure provisions, it shall immediately inform the other Party. The Parties shall thereafter consult to define an appropriate course of action.

I. Consultation

If, for any reason, one of the Parties becomes aware that it will be, or may reasonably be expected to become, unable to meet the non-dissemination provisions of this Agreement, it shall immediately inform the other Party. The Parties shall thereafter consult to define an appropriate course of action.

J. Other

Nothing contained in this Agreement shall preclude a Party from using or disseminating information received without restriction by a Party from sources outside of this Agreement.

ARTICLE VI - INTELLECTUAL PROPERTY

The Parties shall ensure adequate and effective protection of intellectual property created or furnished in the course of Cooperative Research activities undertaken in the fields of science and technology wherever specifically agreed to by the Parties. Rights to such Intellectual Property shall be allocated as set out in this Agreement.

A. Definitions

For purposes of this Agreement, "Intellectual Property" shall have the meaning found in Article 2 of the Convention Establishing the World Intellectual Property Organization, done at Stockholm, July 14, 1967.

"Cooperative Research" means any activity carried on under Written Arrangements between the Parties.

"Written Arrangement" means an arrangement between the Parties regarding Scientific and Technological Cooperative Research Activities which may incorporate the terms of this Agreement.

B. Scope

1. Any Intellectual Property created as a result of scientific and technological cooperative research activities undertaken between the Parties shall be allocated according to the terms of this Agreement, unless otherwise specifically agreed by the Parties.

2. This Agreement addresses the allocation of rights, interests, and royalties between the Parties with respect to cooperative research described in the preamble hereto. Each Party that is involved in a cooperative research activity shall ensure that the other Party can obtain the rights to Intellectual Property allocated in accordance with this Agreement. The Parties shall notify one another in a timely fashion of any Intellectual Property arising in the course of cooperative research and protect such Intellectual Property in a timely fashion. This Agreement does not otherwise alter or prejudice the allocation of Intellectual Property between a Party and its nationals, which shall be determined by the laws of that Party and the practices of the involved Parties.
3. Disputes concerning intellectual property arising under this Agreement shall be resolved in accordance with any applicable Written Agreements between the Parties, except that such Written Arrangements shall not include provisions which call for binding arbitration. In the event that an Applicable Written Arrangement does not include a dispute resolution mechanism, disputes arising under such an arrangement shall be resolved through discussions between the Parties. Upon mutual agreement of the Parties, a dispute shall be submitted to an arbitral tribunal for binding arbitration. Unless the Parties of the concerned Cooperating Entities agree otherwise in writing, the arbitration will be governed by the rules of UNCITRAL. From the date of receipt of an official request by a Party for arbitration and pending resolution of the matter, the Intellectual Property shall be jointly managed (i.e., intellectual property shall be maintained) by the Parties, but shall not be commercially exploited except by mutual agreement, in writing.
4. Termination or expiration of an arrangement or this Agreement shall not affect the validity or duration of intellectual property rights or obligations that arise while an individual Written Agreement is in force.

C. Allocation of Rights

1. Each Party shall be entitled to a non-exclusive, irrevocable, royalty-free license in all countries to translate, reproduce, and publicly distribute scientific and technical journal articles, public reports, and books directly arising from the Cooperative Research. Notwithstanding the preceding sentence, the Parties shall abide by requirements for publication of scientific journals and books, including publishers rights where appropriate, when doing so would promote dissemination of information. All publicly distributed copies of a copyrighted work prepared under this provision shall indicate the names of the authors of the work unless an author explicitly declines to be named.
2. Rights to all forms of Intellectual Property, other than those rights described in Article C.(1) above, shall be allocated as follows:
 - a. Visiting researchers shall receive rights to Intellectual Property according to the policies of the host institution. In addition, each visiting researcher named as an inventor/creator of Intellectual Property shall be entitled to the same treatment as accorded a national of the host country who is a

visiting researcher with regard to awards, bonuses, benefits, royalties and any other awards in accordance with the policies and laws of the host institution.

b. i For Intellectual Property created during joint research, when the Parties have agreed in advance on the scope of work, the Parties shall agree upon a written Arrangement concerning the protection and allocation of rights regarding Intellectual Property that may be created during such research, either prior to the start of their cooperative activity or within a reasonable time from the time a Party becomes aware of the creation of Intellectual Property.

ii In reaching agreement, the Parties shall consider the following factors: relative contributions of the Parties, the benefits of exclusive or non-exclusive licensing by territory or for field of use, requirements imposed by the Parties' domestic laws, and other factors deemed appropriate. The Written Agreement will normally address *inter alia*: ownership and protection of background and foreground information, user rights for research and development purposes, exploitation and dissemination, including arrangements for joint publication, the rights and obligations of visiting researchers, the rules governing disclosure of undisclosed information, licensing, and dispute settlement procedures.

iii Notwithstanding the foregoing, in light of the free trade agreement between the two Parties, if the Parties cannot reach agreement on a Written Arrangement within a reasonable time, not to exceed nine months from the time each Party is made aware of the creation of the Intellectual Property, the Parties shall jointly seek protection for the Intellectual Property in both countries. Each Party shall control Intellectual Property in its own territory and in all cases shall allow its full market access to the other Party to exploit its Intellectual Property rights in accordance with the factors listed in paragraph b.(i) above. Rights and interests in third countries shall be jointly determined.

c. In the event that either Party believes that a particular joint research project under this agreement will lead to, or has led to, the creation of Intellectual Property not protected by the applicable laws of one of the Parties, except in the case of copyright being unavailable for the works of the United States of America, the Parties shall immediately hold discussions to determine the allocation of the rights to the said Intellectual Property; the joint activities in question will be suspended during the discussions unless otherwise agreed in writing by the Parties. If no agreement can be reached within a three-month period from the date of the request for discussions, the Parties shall cease the cooperation in the project in question. Notwithstanding paragraph C.2.b, rights to any Intellectual Property which has been created will be resolved in accordance with the provisions of Article B.3.

ARTICLE VII - FINANCIAL CONSIDERATIONS

In consideration of the USNRC carrying out the obligations specified in this Agreement, AECL shall, subject to the availability of appropriated funds, pay to the USNRC \$35,000.00 US dollars per year during the term of this Agreement; the first payment to be paid within 30 days from the date of signature of this Agreement and subsequent payments to be paid on or before each succeeding anniversary date.

ARTICLE VIII - DISPUTES AND WARRANTY OF INFORMATION

- A. Cooperation under this Agreement will be in accordance with the laws and regulations of the respective countries. Any dispute or questions between the Parties concerning the interpretation or application of this Agreement arising during its term will be settled by mutual agreement of the Parties.
- B. Information furnished by one Party to the other under this Agreement will be accurate to the best knowledge and belief of the Party supplying the information. However, neither Party gives any warranty as to the accuracy of such information or will have any responsibility for the consequences of any use to which such information may be put by the other Party or by any third Party.

ARTICLE IX - OTHER CONSIDERATIONS

- A. In the course of this cooperation, there may be requests by one Party to the other for specific in-kind services beyond the normal implementation of this Agreement. These requests will be considered on a case-by-case basis and may require specific funding. The requesting Party will cover the additional costs.
- B. All USNRC computer codes disseminated under this Agreement are to be considered privileged information unless otherwise noted, are protected as such by the USNRC, and shall be treated likewise by AECL. They are, in particular, subject to all the provisions of Article V including the requirements for an agreement of confidentiality prior to dissemination, with the exception that they need not be marked with the restrictive designation. The codes are subject to this protection in both object and source forms and as recorded in any media.
- C. The USNRC codes and other related analytical techniques covered under this Agreement and any improvements, modifications or updates to such codes or techniques, are for the purpose of reactor and plant systems safety research and licensing and will not be used for commercial purposes, or for other benefits not related to the study of reactor safety without the prior consent of USNRC.

Among the code uses that will be permitted under this Agreement are those related to research in the reactor safety area and analyses performed by the members or their contractors that can assist regulators and plant personnel in assessing the safety of the plant, analyzing operating events, and training operators. Specific examples of

permitted analyses include: design basis accidents (e.g., loss-of-coolant-accidents), anticipated transients, accident management and emergency operating procedures, mid-loop operation, analyses to support PRA success criteria, power upgrades and reload.

Prohibited uses of the codes include: (1) analyses to develop a new reactor design and (2) analyses to support power uprates and reload in the U.S. unless performed by AECL's U.S. subsidiary, AECL Technologies, Inc.

- D. The USNRC codes and other related analytical techniques will not be advertised directly or by implication to obtain contracts related to the construction or servicing of nuclear facilities, nor will advertising imply that the USNRC has endorsed any particular analyses or techniques.
- E. All reports published within the scope of this Agreement and all meetings held will be in English.

ARTICLE X - FINAL PROVISIONS

- A. All information protected by provisions of this Agreement as proprietary, confidential, privileged, or otherwise subject to restriction on disclosure will remain so protected indefinitely, unless otherwise mutually agreed in writing.
- B. Either Party may withdraw from the present Agreement after providing the other Party written notice at least 180 days prior to its intended date of withdrawal. The Party not withdrawing will reserve the right to determine if the withdrawal will result in the other Party receiving a disproportionate share of the expected benefit from this Agreement. If so, both Parties will endeavor to reach an equitable settlement of the matter through negotiation.
- C. All costs arising from implementation of this Agreement will be borne by the Party that incurs them except when specifically agreed otherwise by both Parties.
- D. This Agreement will be effective upon signature by both Parties and will remain in effect for a period of five years. This Agreement may be extended for an additional period of time via an exchange of letters of the Administrators.

E. This Agreement may be amended by written agreement of the Parties. The USNRC and AECL recognize the benefits of international cooperation and will endeavor to obtain a mutually agreeable continuation of this Agreement before its expiration.

IN WITNESS WHEREOF, the Parties have signed the present Agreement.

FOR THE UNITED STATES
NUCLEAR REGULATORY COMMISSION:

BY:

Luis A. Reyes

TITLE: Executive Director
for Operations

DATE: 10/27/04

PLACE: Rockville, Maryland

FOR ATOMIC ENERGY OF
CANADA LIMITED/L'ENERGIE
ATOMIQUE DU CANADA.LIMITEE:

BY:

R.A. Spéranzini

TITLE: General Manager

DATE: 2004 Dec 20

PLACE: CHALK RIVER, ONTARIO

